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ATTENTION: Examiner Chambers, Troy

FAX#: 1-571-273-8300

FROM: **Walter J. Tencza Jr.**

DATE: 10/24/06

NUMBER OF PAGES INCLUDING THIS SHEET: 39

RE: Serial No.: 10/713,127

NOTES: ① Notice of Appeal

② Brief on Appeal

③ Credit Card Payment Form
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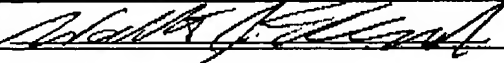
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CERTIFICATION UNDER 37 CFR 1.8

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Walter J. Tencza Jr.

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :
Stria, Ronald M. :
Serial No.: 10/713,127 : Group Art Unit: 3641
Filed: November 14, 2003 : Examiner: Chambers, Troy

Title: MULTI-PURPOSE PYROTECHNIC :
TRAINER :

BRIEF ON APPEAL (INCLUDES APPENDIX OF CLAIMS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The following appeal brief is submitted pursuant the appeal, the notice of appeal being filed herewith, from the action of the primary examiner dated July 25, 2006, in the above identified application. An authorization to charge a credit card for \$500.00 for the notice of appeal, and for

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filing this brief in support of appeal is included with this brief.

I. REAL PARTY IN INTEREST

The real party in interest in this matter is the inventor(s) and applicant(s): Ronald M. Stria, residing at 105 Cemetery Hill Road, Washington, N.J. 07882.

II. RELATED APPEALS AND INTERFERENCES

There are no other current appeals and there are no current interferences related to this matter.

III. STATUS OF CLAIMS

Claims 1-30 are pending in the application. Claims 1-3, 17-20, and 25-28 have been withdrawn. Claims 4-16, 21-24, 29-30 have been rejected. The final form of claims 4-16, 21-24, and 29-30 are involved in this appeal and the final form of these claims are shown on an appendix to this appeal brief.

IV. STATUS OF AMENDMENTS

No amendment was filed subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 4 of the present application, as amended, specifies:

4. A pyrotechnic device for simulating weapons firing and/or hit indications comprised of:
 - a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds;
 - a top plate having a plurality of peripheral conductive discs located thereon corresponding in number to the plurality of receptacles;

wherein the magazine can be placed on the top plate such that each of the plurality of receptacles is located over a corresponding one of the plurality of peripheral conductive discs;

and wherein each of the plurality of blank ammunition rounds can be placed in a corresponding one of the plurality of receptacles so that a first contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of the plurality of peripheral conductive discs.

In at least one embodiment of the present invention, a pyrotechnic device or apparatus 10 for simulating weapons firing and/or hit indications is disclosed. (Present application, Fig. 1, pg. 1, last paragraph – pg. 2, first paragraph.) The apparatus 10 is comprised of a magazine 20 having a plurality of receptacles or bored holes 23 for receiving a plurality of corresponding blank ammunition rounds. (Present application, Fig. 1, pg. 11, second paragraph, pg. 2, first paragraph.) A top plate 30 having a plurality of peripheral conductive discs, such as peripheral conductive disc 304a, corresponding in number to the plurality of receptacles 23 is disclosed. (Present application, Fig. 1, Fig. 3, pg. 12, last paragraph.) The magazine 20 can be placed on the top plate 30 such that each of the plurality of receptacles 23 is located over a corresponding one of the plurality of peripheral conductive discs, such as 304a. (Present application, Id.) Each of the plurality of blank ammunition rounds, such as ammunition rounds 80 or 81, can be placed in a corresponding one of the plurality of receptacles 23 so that a first contact, such as outer contact post 409 of pyrotechnic round 80 or outer contact post 406 of round 81, of each of the plurality of ammunition rounds, makes ohmic contact with a corresponding one of the plurality of conductive discs, such as 304a. (Present application, Pg. 8, second paragraph, Figs. 3, 10, 11, and 12.)

Claim 5 of the present application specifies:

5. The pyrotechnic device of claim 4 wherein
the top plate includes a plurality of center conductive disc pads corresponding to the plurality of peripheral conductive discs and wherein each center conductive disc pad

is located at the center of the plurality of peripheral conductive discs;

wherein there is electrical insulation between each of the plurality of center conductive disc pads and a corresponding one of the plurality of peripheral conductive discs;

and wherein each of the plurality of blank ammunition rounds can be placed in a corresponding one of the plurality of receptacles so that a second contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of the plurality of center conductive disc pads while the first contact of the respective blank ammunition round is in ohmic contact with the corresponding one of the plurality of peripheral conductive discs.

In at least one embodiment of the present invention, the top plate 30 includes a plurality of center conductive disc pads, such as 302a, corresponding to the plurality of peripheral conductive disc pads 304a, and each center conductive disc pad 302a, is located at the center of its corresponding one of the plurality of peripheral conductive discs. (Present application, pg. 8, second paragraph, Fig. 3) There is electrical insulation, such as a nylon flange bushing 306a between each of the plurality of center conductive disc pads, such as 302a and a corresponding one of the plurality of peripheral conductive discs, such as 304a. (Present application, Fig. 10, pg. 8, last paragraph – pg. 9, first paragraph). Each of the plurality of blank ammunition rounds, such as 80 or 81 can be placed in a corresponding one of the plurality of receptacles 23 so that a second contact of each of the plurality of blank ammunition rounds, such as contact 404 of round 81 in Fig. 11 or contact 407 of round 80 in Fig. 12, is in ohmic contact with a corresponding one of the plurality of center conductive disc pads, such as 302a, while the first contact of the respective blank ammunition round, such as contact 406 of round 81 or contact 409 of round 80, is in ohmic contact with the corresponding one of the plurality of peripheral conductive discs, such as 304a. (Present application, pg. 8, second paragraph, Figs. 3, 10, 11, and 12).

Claim 6 of the present application specifies:

6. A pyrotechnic device for simulating weapons firing and/or hit indications comprised of:

a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds;

wherein in response to a command to fire at least two blank ammunition rounds at about the same time the pyrotechnic device fires a first blank ammunition round at a first time and a second blank ammunition round at a second time, wherein the difference between the first time and the second time is less than or equal to thirty milliseconds,

and wherein each of the first and the second blank ammunition rounds includes a bridgewire which causes the firing of the respective blank ammunition round, and wherein the pyrotechnic device causes a first application of current to the bridgewires of the first and second blank ammunition rounds to fire the first and second blank ammunition rounds and wherein after firing the first and second blank ammunition rounds, the pyrotechnic device causes a second application of current to the bridgewires of the first and second blank ammunition rounds in order to burn out the bridgewires.

A pyrotechnic device or apparatus 10 is disclosed in at least one embodiment of the present invention. (Present application, Fig. 1, pg. 1, last paragraph – pg. 2, first paragraph.)

The apparatus 10 is comprised of a magazine 20 having a plurality of receptacles or bored holes 23 for receiving a plurality of corresponding blank ammunition rounds. (Present application, Fig. 1, pg. 11, second paragraph, pg. 2, first paragraph. Multiple rounds can be fired per que or fire command. (Present application, pg. 20: second paragraph – third paragraph). Multiple rounds can be fired by firing a first round at a first time and a second round at a second time, wherein the difference is approximately thirty milliseconds. (Present application, pg. 18, last paragraph). Inside each round, such as round 80 or 81 is a bridgewire, which causes the firing of the respective blank ammunition round. (Present application, pg. 17, last paragraph – pg. 18, first paragraph.) The pyrotechnic device 10 causes a first application of current to the bridgewires to fire and after firing causes a second application of current to the bridgewires to burnout the bridgewires. (Present application, pg. 18, first paragraph – pg. 19, first paragraph)

Claim 7 of the present application specifies:

7. The pyrotechnic device of claim 6 wherein the pyrotechnic device causes about six amps of current to be supplied for about

five hundred milliseconds for each of the bridgewires of the first and second blank ammunition rounds in order to burn out each of the bridgewires.

In at least one embodiment of the present invention, the pyrotechnic device or apparatus 10, causes about six amps of current to be supplied for about five hundred milliseconds for each of the bridge wires in order to burn out each of the bridgewires. (Present application, pg. 20, third paragraph – fourth paragraph).

Claim 8 of the present application specifies:

8. The pyrotechnic device of claim 5 further comprising
an electronic housing;
and wherein each of the plurality of center conductive disc pads is in ohmic contact with one of a plurality of conductive transfer posts; and
wherein each of the plurality of conductive transfer posts runs through the top plate and into the electronic housing.

In at least one embodiment of the present invention, the device or apparatus 10 includes an electronic housing 70. (Present application, pg. 3, Ins. 13-17). Each of the plurality of center conductive disc pads, such as 302a, in Fig. 3, is in ohmic contact with one of a plurality of conductive transfer posts, such as 308a. (Present application, Fig. 9 and 10, pg. 8, second paragraph) Each of the plurality of conductive transfer posts, such as 308a, runs through the top plate 30 and into the electronic housing 70. (Present application, Fig. 10)

Claim 9 of the present application specifies:

9. The pyrotechnic device of claim 8 further comprising
an interface circuit board;
wherein each of the plurality of conductive transfer posts is in ohmic contact with one of a corresponding plurality of bridge springs;
and wherein each of the plurality of bridge springs is ohmically in contact with an exposed area on the interface circuit board;
and wherein a central processing unit can selectively fire any one of the corresponding plurality of blank ammunition rounds located in any one of the plurality of receptacles.

The present application discloses that, in one embodiment, there is an interface circuit

board, not shown, inside of the electronic housing 70. (Present application, pg. 8, Ins. 11-14). Each of the plurality of conductive transfer posts, such as 308a, is in ohmic contact with one of a corresponding plurality of bridge springs, such as 314a. (Present application, Fig. 10, pg. 13, last paragraph). Each of the plurality of bridge springs, such as 314a, is in contact with an exposed area on the interface circuit board, not shown. (Present application, pg. 8, Ins. 11-13). A central processing unit, or CPU, can selectively fire any one of the corresponding plurality of blank ammunition rounds located in any one of the plurality of receptacles 23. (Present application, pg. 8, Ins. 14-15).

Claim 10 of the present application specifies:

10. The device of claim 4 wherein
each of the plurality of peripheral conductive discs is made of conductive rubber.

In at least one embodiment of the present invention each of the plurality of peripheral conductive discs is made of conductive rubber as indicated in originally filed claims 9 and 10.

Claim 11 of the present application specifies:

11. A pyrotechnic device for simulating weapons firing and/or hit indications comprising
a magazine comprised of a plurality of receptacles having a plurality of corresponding bores for receiving a corresponding plurality of rounds of blank ammunition of a first type or a second type or a corresponding plurality of rounds of blank ammunition of a first type and a second type;
wherein each bore has upper, middle, and lower sections;
wherein each upper section has a first diameter, each middle section has a second diameter, and each lower section has a third diameter;
wherein the first diameter is less than the second diameter and the second diameter is less than the third diameter;
wherein the magazine has a top surface and a bottom surface, and wherein each upper section begins at the top surface and ends inside the respective bore, and wherein each lower section begins at the bottom surface and ends inside the respective bore;
wherein each of the plurality of rounds of blank ammunition of the first type can be inserted into any of the plurality of bores so that at least a portion of each of the plurality of rounds of blank ammunition of the first type lie inside the upper, middle, and lower sections of the respective bore at the same time;
wherein each of the plurality of rounds of blank ammunition of the second type can

be inserted into any of the plurality of bores so that at least a portion of each of the plurality of rounds of blank ammunition of the second type lie inside the upper, middle, and lower sections of the respective bore at the same time;

and wherein each of the plurality of rounds of blank ammunition of the first type is the same, each of the plurality of rounds of blank ammunition of the second type is the same, and each of the plurality of rounds of blank ammunition of the first type differ in size from each of the plurality of rounds of blank ammunition of the second type.

In at least one embodiment of the present invention, a magazine 20 is disclosed comprised of a plurality of receptacles 23, having a plurality of corresponding bores, such as bore 23a, 23b, 23c, for receiving a plurality of rounds of blank ammunition of a first type, such as round 80, or a second type such as round 81, or of both the first type and the second type. (Present application, Fig. 1, pg. 3, second paragraph of detailed description, pg. 11). The bores, such as bore 23a, each have upper, middle and lower sections, such as sections similar sections at borings 25c, 25b, and 25a. (Present application, Fig. 4, pg. 5, second paragraph). The boring 25a, or lower section, may have a diameter of approximately 1.337" and it accepts the diameter created by component 401 of Fig. 12. The boring 25b, or middle section, may have a diameter of approximately 1.263" and accepts the diameter created by component 400 of Fig. 11. The boring 25c, or upper section, is used to accept the diameters created by component 402 of Fig. 11 and Fig. 12 which are equal in size and may have a diameter of approximately 1.121". (Present application, pg. 5, second paragraph). The boring 25c, or upper section, may have a diameter of 1.121 inches which is less than the diameter of the boring 25b, which may be 1.263 inches. The boring 25b may have a diameter which is less than the diameter of the boring 25a which may be 1.337 inches. (Present application, pg. 5, second paragraph). The magazine 20 has a top surface 20a and a bottom surface 20b, and each upper section, such as at the boring 25c, begins at the top surface 20a and ends inside the respective bore, and each lower section, such as at boring 25a, begins at the bottom surface or underside 20b and ends inside the

respective bore. (Present application, Fig. 1, Fig. 4, Pg. 7, second paragraph).

Each of the plurality of rounds of blank ammunition of the first type, such as round 80 can be inserted into any of the plurality of bores, such as 23a, so that at least a portion of each of the plurality of rounds of blank ammunition of the first type lie inside the upper, middle and lower sections, such as borings 25c, 25b, and 25a of the respective bore such as 23a, at the same time. (Present application, Fig. 1, Fig. 4, pg. 5, second paragraph). Each of the plurality of rounds of blank ammunition of the second type, such as 81, can be inserted into any of the plurality of bores, such as 23a, so that at least a portion of each of the plurality of rounds of blank ammunition of the second type, 81, lie inside the upper middle and lower sections, such as borings 25c, 25b, and 25a of the respective bore such as 23a at the same time. (Present application, Fig. 1, Fig. 4, pg. 5, second paragraph) Each of the plurality of rounds of blank ammunition of the first type, such as 80, can be the same, and each of the plurality of rounds of ammunition of the second type, such as 81 can be the same, and each of the plurality of rounds of blank ammunition of the first type, 80, differ in size from each of the plurality of round of blank ammunition of the second type, such as 81. (Present application, pg. 5, second paragraph, Fig. 11 and Fig. 12).

Claim 12 of the present application specifies:

12. The pyrotechnic device of claim 11 wherein

each of the plurality of rounds of blank ammunition of the first type is an M30 round and each of the plurality of rounds of blank ammunition of the second type is an M31 round.

In at least one embodiment of the present invention, each of the plurality of rounds of blank ammunition of the first type, such as 80, may be an M30 round, and each of the plurality of rounds of blank ammunition of the second type may be an M31 round. (Present application,

pg. 5, second paragraph).

Claim 13 of the present application specifies:

13. The device as claimed in Claim 4 further comprising
an electronic housing comprised of circuitry;
wherein the circuitry provides for self-testing.

In at least one embodiment of the present invention, an electronic housing 70 is provided comprised of circuitry. (Present application, pg. 7, first paragraph.) The circuitry provides for self-testing. (Present application, pg. 14, last paragraph – pg. 15, second paragraph)

Claim 14 of the present application specifies:

14. The device as claimed in Claim 4 further comprising
an electronic housing comprised of circuitry;
wherein the circuitry provides the capability of fifteen programmable firing
sequences and igniting one or more of the plurality of blank ammunition rounds.

In at least one embodiment of the present invention, an electronic housing 70 is provided comprised of circuitry. (Present application, pg. 7, first paragraph.) The circuitry provides the capability of fifteen programmable firing sequences and igniting one or more of the plurality of blank ammunition rounds. (Present application, pg. 14, last paragraph – pg. 15, third paragraph)

Claim 15 of the present application specifies:

15. The device as claimed in Claim 4, further comprising
an electronic housing comprised of circuitry wherein
the circuitry can perform a special ignition application.

In at least one embodiment of the present invention, an electronic housing 70 is provided comprised of circuitry. (Present application, pg. 7, first paragraph.) The circuitry can perform a special ignition application. (Present application, pg. 14, last paragraph – pg. 15, third paragraph, Pg. 11, first paragraph, Pg. 17, paragraph 3)

Claim 16 of the present application specifies:

16. The device of claim 15 wherein
the special ignition application is an anti-personnel application.

In at least one embodiment of the present invention, the special ignition application may be an anti-personnel application. (Present application, pg. 17, third paragraph).

Claim 21 of the present application specifies:

21. A pyrotechnic device for simulating weapons firing and/or hit indications, comprising a magazine comprised of a plurality of receptacles for receiving a corresponding plurality of rounds, the magazine having an underside surface;
wherein a plurality of safety interlocks are located on the underside surface of the magazine;
further comprising a top plate having a top surface on which are located a plurality of contact pads which correspond in number to the plurality of safety interlocks;
wherein the magazine can be placed on top of the top plate so that the underside surface of the magazine lies on top of the top surface of the top plate and each of the plurality of safety interlocks on the magazine comes in ohmic contact with a corresponding one of the plurality of contact pads on the top plate;
and wherein the pyrotechnic device does not arm when power is applied unless each of the plurality of safety interlocks on the magazine is in ohmic contact with a corresponding one of the plurality of contact pads on the top plate.

In at least one embodiment of the present invention, the magazine 20 has an underside surface 20b. (Present application, Fig. 4, pg. 7, second paragraph). A plurality of safety interlocks 28 are located on the underside surface 20b of the magazine 20. (Present application, Fig. 7, pg. 6, last paragraph – pg. 7, first paragraph) A top plate 30 is disclosed, having a top surface on which are located a plurality of contact pads 90 which correspond in number to the plurality of safety interlocks 28. (Present application, Fig. 3, Fig. 7, p. 6, last paragraph – pg. 7, first paragraph). The magazine 20 can be placed on top of the top plate 30 so that the underside surface 20b of the magazine 20 lies on top of the top surface of the top plate 30 and each of the plurality of safety interlocks 28 on the magazine 20 comes in ohmic contact with a corresponding one of the plurality of contact pads 90 on the top plate 30.

(Present application, Fig. 1, Fig. 3, Fig. 7, p. 6, last paragraph – pg. 7, first paragraph). The pyrotechnic device or apparatus 10 does not arm when power is applied unless each of the plurality of safety interlocks 28 on the magazine 20 is in ohmic contact with a corresponding one of the plurality of contact pads 90 on the top plate 30. (Present application, Fig. 1, Fig. 3, Fig. 7, p. 6, last paragraph – pg. 7, first paragraph)

Claim 22 of the present application specifies:

22. The pyrotechnic device of claim 21 further comprising
a latching device which latches the magazine to the top plate, wherein the latching device causes each of the plurality of safety interlocks on the magazine to come in ohmic contact with a corresponding one of the plurality of contact pads on the top plate.

In at least one embodiment of the present invention, a pyrotechnic device or apparatus 10 is disclosed. (Present application, pg. 3, Ins. 8-15.) A latching device is provided, such as one or more of latch keepers 21a and 22a and latch-to-latch assemblies 62 and 60 latch the magazine 20 to the top plate 30, such that each of the plurality of safety interlocks 28 on the magazine 20 come in ohmic contact with a corresponding one of the plurality of contact pads 90 on the top plate 30. (Present application, Fig. 1, Fig. 3, Fig. 7, p. 6, last paragraph – pg. 7, first paragraph)

Claim 23 of the present application specifies:

23. The pyrotechnic device of claim 21, further comprising
an electronic housing including circuitry;
wherein the circuitry is located on a circuit board, and the circuitry comes in ohmic contact with the plurality of contact pads on the top plate.

In at least one embodiment of the present invention, an electronic housing 70 is provided comprised of circuitry. (Present application, pg. 7, first paragraph.) The circuitry

comes in ohmic contact with the plurality of contact pads 90 on the top plate 30. (Present application, pg. 6, last paragraph – pg. 7, first paragraph).

Claim 24 of the present application specifies:

24. The pyrotechnic device of claim 23, wherein
a remote control signal can be used to operate the circuitry and thereby operate the pyrotechnic device.

In at least one embodiment of the present invention, a remote control signal can be used to operate the circuitry and thereby operate the pyrotechnic device. (Present application, pg. 16, paragraph 1).

Claim 29 of the present application specifies:

29. The pyrotechnic device of claim 8 further comprising
a plurality of non-conductive washers, each of which is placed around one of the plurality of transfer posts, wherein there is at least one non-conductive washer for each of the plurality of transfer posts;
wherein there are a plurality of bored holes in the electronic housing;
wherein each transfer post lies at least partially inside of one of the plurality of bored holes in the electronic housing, wherein there is one transfer post for each bored hole;
and wherein each of the plurality of non-conductive washers forms a seal between the top plate and the electronic housing so that no liquid can enter the electronic housing through any of the plurality of bored holes.

In at least one embodiment of the present invention, a plurality of non-conductive washers is disclosed, such as washer 310a, each of which is placed around one of the plurality of transfer posts, such as transfer post 308a, wherein there is at least one non-conductive washer, such as 310a, for each of the plurality of transfer posts, such as 308a. (Present application, pg. 8, second paragraph – pg. 9, first paragraph, Figs. 3, 9, 10). There are a plurality of bored holes, such as 71a, in the electronic housing 70. (Present application, Pg. 9, first paragraph, Fig. 10.) Each transfer post, such as 308a lies at least partially inside of one of the plurality of bored holes, such as 71a in the electronic housing 70, wherein there is one transfer post, such as 308a, for

each bored hole, such as 71a. (Present application, Fig. 3, Fig. 10). Each of the plurality of non-conductive washers, such as 310a, forms a seal between the top plate 30 and the electronic housing 70 so that no liquid can enter the electronic housing 70 through any of the plurality of bored holes, such as 71a. (Present application, Pg. 8, last paragraph – pg. 9, first paragraph, Fig. 3, Fig. 10).

Claim 30 of the present application specifies:

30. The pyrotechnic device of claim 29 wherein each of the plurality of non-conductive washers is a neoprene washer.

In at least one embodiment of the present invention, each of the plurality of non-conductive washers, such as 310a, may be a neoprene washer. (Present application, pg. 10, second paragraph).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are as follows:

- (A) Claims 4-10, and 13-16, 21-24, 29 and 30 were rejected under 35 U.S.C. 102(b) as being unpatentable over Wells (U.S. Patent No. 2,717,533).
- (B) Claims 11 and 12 were rejected under 35 U.S.C. 102(e) as being anticipated by Bunney (U.S. published patent application no. 20060123684).

VII. ARGUMENT

A. Point I – Claims 4-10, 13-16, 21-24, 29, and 30 should not have been rejected under 35 U.S.C. 102 based on Wells

The examiner has rejected claims 4-10, 13-16, 21-24, 29, and 30 under 35 U.S.C. 102 based on Wells. The applicant respectfully submits that the claims rejected under 35 U.S.C.

102 based on Wells do not stand or fall together. Each of the claims will be argued separately but some of the arguments may apply to more than one claim.

(a) Claim 4 should not have been rejected under 35 U.S.C. 102

Claim 4 of the present application specifies:

4. A pyrotechnic device for simulating weapons firing and/or hit indications comprised of:
 - a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds;
 - a top plate having a plurality of peripheral conductive discs located thereon corresponding in number to the plurality of receptacles;
 - wherein the magazine can be placed on the top plate such that each of the plurality of receptacles is located over a corresponding one of the plurality of peripheral conductive discs;
 - and wherein each of the plurality of blank ammunition rounds can be placed in a corresponding one of the plurality of receptacles so that a first contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of the plurality of peripheral conductive discs.

Wells does not disclose a pyrotechnic device for simulating weapons firing and/or hit indications. Wells relates to a photoflash device for making photographic surveys. (Wells, col. 1, Ins. 15-17). While Wells provides a cartridge holding rack 3 for holding a plurality of photoflash cartridges (Wells, col. 2, Ins. 2 – 7, col. 1, Ins. 15-20), Wells does not disclose a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds. Wells does not in any way refer to blank ammunition rounds. Wells does not disclose that a plurality of blank ammunition rounds can be placed in a corresponding one of a plurality of receptacles so that a first contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of a plurality of peripheral conductive discs. Claim 4 is respectfully submitted to be allowable for at least the previous reasons.

(b) Claim 5 should not have been rejected under 35 U.S.C. 102

Claim 5 of the present application specifies:

5. The pyrotechnic device of claim 4 wherein

the top plate includes a plurality of center conductive disc pads corresponding to the plurality of peripheral conductive discs and wherein each center conductive disc pad is located at the center of the plurality of peripheral conductive discs;

wherein there is electrical insulation between each of the plurality of center conductive disc pads and a corresponding one of the plurality of peripheral conductive discs;

and wherein each of the plurality of blank ammunition rounds can be placed in a corresponding one of the plurality of receptacles so that a second contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of the plurality of center conductive disc pads while the first contact of the respective blank ammunition round is in ohmic contact with the corresponding one of the plurality of peripheral conductive discs.

Claim 5 is dependent on claim 4 and is submitted to be allowable for at least the same reasons. Claim 5 includes further limitations which are not disclosed by Wells. For example, Wells does not disclose that each of a plurality of blank ammunition rounds can be placed in a corresponding one of the plurality of receptacles so that a second contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of the plurality of center conductive disc pads while the first contact of the respective blank ammunition round is in ohmic contact with the corresponding one of the plurality of peripheral conductive discs. Claim 5 is submitted to be allowable for these reasons also.

(c) Claim 6 should not have been rejected under 35 U.S.C. 102

Claim 6 of the present application specifies:

6. A pyrotechnic device for simulating weapons firing and/or hit indications comprised of:
a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds;

wherein in response to a command to fire at least two blank ammunition rounds at about the same time the pyrotechnic device fires a first blank ammunition round at a first time and a second blank ammunition round at a second time, wherein the difference between the first time and the second time is less than or equal to thirty milliseconds,

and wherein each of the first and the second blank ammunition rounds includes a bridgewire which causes the firing of the respective blank ammunition round, and wherein the pyrotechnic device causes a first application of current to the bridgewires of the first and second blank ammunition rounds to fire the first and second blank

ammunition rounds and wherein after firing the first and second blank ammunition rounds, the pyrotechnic device causes a second application of current to the bridgewires of the first and second blank ammunition rounds in order to burn out the bridgewires.

Wells does not disclose a pyrotechnic device for simulating weapons firing and/or hit indications. Wells relates to a photoflash device for making photographic surveys. (Wells, col. 1, Ins. 15-17). While Wells provides a cartridge holding rack 3 for holding a plurality of photoflash cartridges (Wells, col. 2, Ins. 2 – 7, col. 1, Ins. 15-20), Wells does not disclose a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds. Wells does not in any way refer to blank ammunition rounds.

Wells does not disclose a pyrotechnic device that in response to a command to fire at least two blank ammunition rounds at about the same time, fires a first blank ammunition round at a first time and a second blank ammunition round at a second time, wherein the difference between the first time and the second time is less than or equal to thirty milliseconds.

Wells does not disclose first and second blank ammunition rounds that include a bridgewire which causes the firing of the respective blank ammunition round. Wells does not disclose a pyrotechnic device that causes a first application of current to the bridgewires of the first and second blank ammunition rounds to fire the first and second blank ammunition rounds and wherein after firing the first and second blank ammunition rounds, the pyrotechnic device causes a second application of current to the bridgewires of the first and second blank ammunition rounds in order to burn out the bridgewires.

Claim 6 is respectfully submitted to be allowable for at least the previous reasons.

(d) Claim 7 should not have been rejected under 35 U.S.C. 102

Claim 7 of the present application specifies:

7. The pyrotechnic device of claim 6 wherein the pyrotechnic device causes about

six amps of current to be supplied for about five hundred milliseconds for each of the bridgewires of the first and second blank ammunition rounds in order to burn out each of the bridgewires.

Claim 7 is dependent on claim 6 and is submitted to be allowable for at least the same reasons. Claim 7 includes further limitations which are not disclosed by Wells. For example, Wells does not disclose a pyrotechnic device that causes about six amps of current to be supplied for five hundred milliseconds for each of the bridgewires of first and second blank ammunition rounds in order to burn out each of the bridgewires. Claim 7 is submitted to be allowable for these reasons also.

(e) Claim 8 should not have been rejected under 35 U.S.C. 102

Claim 8 of the present application specifies:

8. The pyrotechnic device of claim 5 further comprising
an electronic housing;
and wherein each of the plurality of center conductive disc pads is in
ohmic contact with one of a plurality of conductive transfer posts; and
wherein each of the plurality of conductive transfer posts runs through the
top plate and into the electronic housing.

Claim 8 is dependent on claim 5 and is submitted to be allowable for at least the same reasons. Claim 8 includes further limitations which are not disclosed by Wells. For example, the examiner incorrectly indicates that element 51 (contact) in Wells is a conductive transfer post. However, the contact 51 in Wells, does not run through a top plate (on which is located the conductive disc pads) and into an electronic housing. The contact 51 is mounted on the casing 1, but does not run through the casing 1 and into an electronic housing, but rather extends outward from the casing 1. (Wells, col. 2, lns. 42-69, Fig. 1 and 3). Claim 8 is submitted to be allowable for these reasons also.

(f) Claim 9 should not have been rejected under 35 U.S.C. 102

Claim 9 of the present application specifies:

9. The pyrotechnic device of claim 8 further comprising
an interface circuit board;
wherein each of the plurality of conductive transfer posts is in ohmic contact with
one of a corresponding plurality of bridge springs;
and wherein each of the plurality of bridge springs is ohmically in contact with an
exposed area on the interface circuit board;
and wherein a central processing unit can selectively fire any one of the corresponding
plurality of blank ammunition rounds located in any one of the plurality of receptacles.

Claim 9 is dependent on claim 8 and is submitted to be allowable for at least the same reasons. Claim 9 includes further limitations which are not disclosed by Wells. For example, while Wells generally discloses spring 53, the spring 53 biases contacts 51 outwardly, but is not disclosed as being in ohmic contact with a conductive transfer post. Also, spring 53 is not disclosed as being in ohmic contact with an exposed area on an interface circuit board. (Wells, Fig. 6, col. 2, lns. 43-50). In contrast, in an embodiment of the present application, each of the plurality of conductive transfer posts, such as 308a, is in ohmic contact with one of a corresponding plurality of bridge springs, such as 314a. (Present application, Fig. 10, pg. 13, last paragraph). Furthermore, in an embodiment of the present invention, each of the plurality of bridge springs, such as 314a, is in contact with an exposed area on the interface circuit board, not shown. (Present application, pg. 8, lns. 11-13).

Wells also does not disclose a central processing unit which can selectively fire any one of a corresponding plurality of blank ammunition rounds located in any one of the plurality of receptacles.

Claim 9 is submitted to be allowable for at least these previous reasons also.

(g) Claim 10 should not have been rejected under 35 U.S.C. 102

Claim 10 of the present application specifies:

10. The device of claim 4 wherein
each of the plurality of peripheral conductive discs is made of conductive rubber.

Claim 10 is dependent on claim 4 and is submitted to be allowable for at least the same reasons. Claim 10 includes further limitations which are not disclosed by Wells. For example, as the examiner concedes (Examiner's office action 7/25/2006, pg. 3), discs 54 in Wells are not disclosed as being conductive rubber. In contrast, claim 10 of the present invention specifies that each of the plurality of conductive discs is made of conductive rubber. Regarding the examiner's statement that "comprising" language "operates to open up claim 10 to materials other than conductive rubber", the applicant does not understand what the examiner is saying. Claim 10 is a dependent claim which specifically requires "made of conductive rubber" and Wells does not show "made of conductive rubber". Claim 10 is allowable for at least these reasons also.

(h) Claim 13 should not have been rejected under 35 U.S.C. 102

Claim 13 of the present application specifies:

13. The device as claimed in Claim 4 further comprising
an electronic housing comprised of circuitry;
wherein the circuitry provides for self-testing.

Claim 13 is dependent on claim 4 and is submitted to be allowable for at least the same reasons. Claim 13 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose circuitry which provides self testing as specified by claim 13 of the present invention. Claim 13 is allowable for at least these reasons also.

(i) Claim 14 should not have been rejected under 35 U.S.C. 102

Claim 14 of the present application specifies:

14. The device as claimed in Claim 4 further comprising
an electronic housing comprised of circuitry;
wherein the circuitry provides the capability of fifteen programmable firing
sequences and igniting one or more of the plurality of blank ammunition rounds.

Claim 14 is dependent on claim 4 and is submitted to be allowable for at least the same reasons. Claim 14 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose circuitry which provides the capability of fifteen programmable firing sequences and igniting one or more of a plurality of blank ammunition rounds. Claim 14 is allowable for at least these reasons also.

(j) Claim 15 should not have been rejected under 35 U.S.C. 102

Claim 15 of the present application specifies:

15. The device as claimed in Claim 4, further comprising
an electronic housing comprised of circuitry wherein
the circuitry can perform a special ignition application.

Claim 15 is dependent on claim 4 and is submitted to be allowable for at least the same reasons. Claim 15 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose circuitry which can perform a special ignition application. Claim 15 is allowable for at least these reasons also.

(k) Claim 16 should not have been rejected under 35 U.S.C. 102

Claim 16 of the present application specifies:

16. The device of claim 15 wherein
the special ignition application is an anti-personnel application.

Claim 16 is dependent on claim 15 and is submitted to be allowable for at least the same reasons. Claim 16 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose that the circuitry can perform a special ignition application which is an anti-personnel application. Claim 16 is allowable for at least these reasons also.

(I) Claim 21 should not have been rejected under 35 U.S.C. 102

Claim 21 of the present application specifies:

21. A pyrotechnic device for simulating weapons firing and/or hit indications, comprising a magazine comprised of a plurality of receptacles for receiving a corresponding plurality of rounds, the magazine having an underside surface;
wherein a plurality of safety interlocks are located on the underside surface of the magazine;
further comprising a top plate having a top surface on which are located a plurality of contact pads which correspond in number to the plurality of safety interlocks;
wherein the magazine can be placed on top of the top plate so that the underside surface of the magazine lies on top of the top surface of the top plate and each of the plurality of safety interlocks on the magazine comes in ohmic contact with a corresponding one of the plurality of contact pads on the top plate;
and wherein the pyrotechnic device does not arm when power is applied unless each of the plurality of safety interlocks on the magazine is in ohmic contact with a corresponding one of the plurality of contact pads on the top plate.

Wells does not disclose a pyrotechnic device for simulating weapons firing and/or hit indications. Wells relates to a photoflash device for making photographic surveys. (Wells, col. 1, Ins. 15-17). While Wells provides a cartridge holding rack 3 for holding a plurality of photoflash cartridges (Wells, col. 2, Ins. 2 – 7, col. 1, Ins. 15-20), Wells does not disclose a magazine having a plurality of receptacles for receiving a plurality of corresponding rounds.

Wells also does not disclose a plurality of safety interlocks wherein a pyrotechnic device does not arm when power is applied unless each of the plurality of safety interlocks on the magazine is in ohmic contact with a corresponding one of the plurality of contact pads on the

top plate. The examiner incorrectly refers to flanges 43 as safety interlocks (Examiner's office action 7/25/2006, page. 3, paragraph 4). However, there is no disclosure that flanges 43 of Wells, come in ohmic contact with a plurality of contact pads on a top plate or that that is required for using the photography device. In contrast, in at least one embodiment of the present invention, the pyrotechnic device or apparatus 10 does not arm when power is applied unless each of the plurality of safety interlocks 28 on the magazine 20 is in ohmic contact with a corresponding one of the plurality of contact pads 90 on the top plate 30. (Present application, Fig. 1, Fig. 3, Fig. 7, p. 6, last paragraph – pg. 7, first paragraph)

Claim 21 is respectfully submitted to be allowable for at least the previous reasons.

(m) Claim 22 should not have been rejected under 35 U.S.C. 102

Claim 22 of the present application specifies:

22. The pyrotechnic device of claim 21 further comprising

a latching device which latches the magazine to the top plate, wherein the latching device causes each of the plurality of safety interlocks on the magazine to come in ohmic contact with a corresponding one of the plurality of contact pads on the top plate.

Claim 22 is dependent on claim 21 and is submitted to be allowable for at least the same reasons. Claim 22 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose a latching device which latches a magazine to the top plate, wherein the latching device causes each of the plurality of safety interlocks on the magazine to come in ohmic contact with a corresponding one of the plurality of contact pads on the top plate. Claim 22 is allowable for at least these reasons also.

(n) Claim 23 should not have been rejected under 35 U.S.C. 102

Claim 23 of the present application specifies:

23. The pyrotechnic device of claim 21, further comprising
an electronic housing including circuitry;
wherein the circuitry is located on a circuit board, and the circuitry comes in
ohmic contact with the plurality of contact pads on the top plate.

Claim 23 is dependent on claim 21 and is submitted to be allowable for at least the same reasons. Claim 23 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose circuitry located on a circuit board, wherein the circuitry comes in ohmic contact with the plurality of contact pads on the top plate. The examiner incorrectly refers to a lower plate 31 in Wells (Wells, Fig. 2, col. 2, ln. 30) as a "circuit board" (Examiner's office action 7/25/2006), however, 31 is not a circuit board.

Claim 23 is allowable for at least these reasons also.

(o) Claim 24 should not have been rejected under 35 U.S.C. 102

Claim 24 of the present application specifies:

24. The pyrotechnic device of claim 23, wherein
a remote control signal can be used to operate the circuitry and thereby operate
the pyrotechnic device.

Claim 24 is dependent on claim 23 and is submitted to be allowable for at least the same reasons. Claim 24 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose a remote control signal that can be used to operate circuitry and thereby operate a pyrotechnic device.

Claim 24 is allowable for at least these reasons also.

(p) Claim 29 should not have been rejected under 35 U.S.C. 102

Claim 29 of the present application specifies:

29. The pyrotechnic device of claim 8 further comprising
a plurality of non-conductive washers, each of which is placed around one of the plurality of transfer posts, wherein there is at least one non-conductive washer for each of the plurality of transfer posts;
wherein there are a plurality of bored holes in the electronic housing;
wherein each transfer post lies at least partially inside of one of the plurality of bored holes in the electronic housing, wherein there is one transfer post for each bored hole;
and wherein each of the plurality of non-conductive washers forms a seal between the top plate and the electronic housing so that no liquid can enter the electronic housing through any of the plurality of bored holes.

Claim 29 is dependent on claim 8 and is submitted to be allowable for at least the same reasons. Claim 29 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose a plurality of non-conductive washers, each of which forms a seal between a top plate and an electronic housing so that no liquid can enter the electronic housing through any of a plurality of bored holes.

Claim 29 is allowable for at least these reasons also.

(q) Claim 30 should not have been rejected under 35 U.S.C. 102

Claim 30 of the present application specifies:

The pyrotechnic device of claim 29 wherein
each of the plurality of non-conductive washers is a neoprene washer.

Claim 30 is dependent on claim 29 and is submitted to be allowable for at least the same reasons. Claim 30 includes further limitations which are not disclosed by Wells. For example, Wells, does not disclose a plurality of non-conductive washers which are neoprene washers. Claim 30 is allowable for at least these reasons also.

B. Point II - Claims 11 and 12 should not have been rejected under 35 U.S.C. 102 based on Bunney

The examiner has rejected claims 11-12 under 35 U.S.C. 102 based on Bunney. The applicant respectfully submits that the claims rejected under 35 U.S.C. 102 based on Bunney do not stand or fall together. Each of the claims will be argued separately but some of the arguments may apply to more than one claim.

(a) Claim 11 should not have been rejected under 35 U.S.C. 102

Claim 11 of the present application specifies:

11. A pyrotechnic device for simulating weapons firing and/or hit indications comprising a magazine comprised of a plurality of receptacles having a plurality of corresponding bores for receiving a corresponding plurality of rounds of blank ammunition of a first type or a second type or a corresponding plurality of rounds of blank ammunition of a first type and a second type;

wherein each bore has upper, middle, and lower sections;

wherein each upper section has a first diameter, each middle section has a second diameter, and each lower section has a third diameter;

wherein the first diameter is less than the second diameter and the second diameter is less than the third diameter;

wherein the magazine has a top surface and a bottom surface, and wherein each upper section begins at the top surface and ends inside the respective bore, and wherein each lower section begins at the bottom surface and ends inside the respective bore;

wherein each of the plurality of rounds of blank ammunition of the first type can be inserted into any of the plurality of bores so that at least a portion of each of the plurality of rounds of blank ammunition of the first type lie inside the upper, middle, and lower sections of the respective bore at the same time;

wherein each of the plurality of rounds of blank ammunition of the second type can be inserted into any of the plurality of bores so that at least a portion of each of the plurality of rounds of blank ammunition of the second type lie inside the upper, middle, and lower sections of the respective bore at the same time;

and wherein each of the plurality of rounds of blank ammunition of the first type is the same, each of the plurality of rounds of blank ammunition of the second type is the same, and each of the plurality of rounds of blank ammunition of the first type differ in size from each of the plurality of rounds of blank ammunition of the second type.

Bunney relates to a gun. (Bunney, pg. 1, col. 1, paragraph 2). Bunney does not disclose a magazine having a plurality of receptacles having a plurality of corresponding bores for receiving a corresponding plurality of rounds of blank ammunition of a first type or a second type or a corresponding plurality of rounds of blank ammunition of a first type and a second type. Bunney does not specify blank ammunition or two different types of blank ammunition. The examiner refers to diameters of elements 60, 62, and 64 as three different diameters in Bunney. (Bunney, Fig. 4). However, element 64 by itself appears to be a bullet (Bunney, Pg. 3, paragraph 61), and whatever elements 60 and 62 are, Bunney does not disclose that blank ammunition rounds of first and second types fit into three different diameter sections of a bore as specified in claim 11.

Claim 11 is respectfully submitted to be allowable for at least the previous reasons.

(b) Claim 12 should not have been rejected under 35 U.S.C. 102

Claim 12 of the present application specifies:

12. The pyrotechnic device of claim 11 wherein
each of the plurality of rounds of blank ammunition of the first type is an M30 round and each of the plurality of rounds of blank ammunition of the second type is an M31 round.

Claim 12 is dependent on claim 11 and is submitted to be allowable for at least the same reasons. Claim 12 includes further limitations which are not disclosed by Bunney. For example, Bunney does not disclose M30 rounds for blank ammunition of a first type or M31 rounds for blank ammunition of a second type. Claim 12 is allowable for at least these reasons also.

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VIII. APPENDIX OF FINAL FORM OF CLAIMS INVOLVED IN APPEAL

4. A pyrotechnic device for simulating weapons firing and/or hit indications comprised of:

a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds;

a top plate having a plurality of peripheral conductive discs located thereon corresponding in number to the plurality of receptacles;

wherein the magazine can be placed on the top plate such that each of the plurality of receptacles is located over a corresponding one of the plurality of peripheral conductive discs;

and wherein each of the plurality of blank ammunition rounds can be placed in a corresponding one of the plurality of receptacles so that a first contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of the plurality of peripheral conductive discs.

5. The pyrotechnic device of claim 4 wherein

the top plate includes a plurality of center conductive disc pads corresponding to the plurality of peripheral conductive discs and wherein each center conductive disc pad is located at the center of the plurality of peripheral conductive discs;

wherein there is electrical insulation between each of the plurality of center conductive disc pads and a corresponding one of the plurality of peripheral conductive discs;

and wherein each of the plurality of blank ammunition rounds can be placed in a corresponding one of the plurality of receptacles so that a second contact of each of the plurality of blank ammunition rounds is in ohmic contact with a corresponding one of the plurality of center conductive disc pads while the first contact of the respective blank

ammunition round is in ohmic contact with the corresponding one of the plurality of peripheral conductive discs.

6. A pyrotechnic device for simulating weapons firing and/or hit indications comprised of:
a magazine having a plurality of receptacles for receiving a plurality of corresponding blank ammunition rounds;

wherein in response to a command to fire at least two blank ammunition rounds at about the same time the pyrotechnic device fires a first blank ammunition round at a first time and a second blank ammunition round at a second time, wherein the difference between the first time and the second time is less than or equal to thirty milliseconds,

and wherein each of the first and the second blank ammunition rounds includes a bridgewire which causes the firing of the respective blank ammunition round, and wherein the pyrotechnic device causes a first application of current to the bridgewires of the first and second blank ammunition rounds to fire the first and second blank ammunition rounds and wherein after firing the first and second blank ammunition rounds, the pyrotechnic device causes a second application of current to the bridgewires of the first and second blank ammunition rounds in order to burn out the bridgewires.

7. The pyrotechnic device of claim 6 wherein

the pyrotechnic device causes about six amps of current to be supplied for about five hundred milliseconds for each of the bridgewires of the first and second blank ammunition rounds in order to burn out each of the bridgewires.

8. The pyrotechnic device of claim 5 further comprising

an electronic housing;

and wherein each of the plurality of center conductive disc pads is in ohmic contact with one of a plurality of conductive transfer posts; and

wherein each of the plurality of conductive transfer posts runs through the top plate and into the electronic housing.

9. The pyrotechnic device of claim 8 further comprising

an interface circuit board;

wherein each of the plurality of conductive transfer posts is in ohmic contact with one of

a corresponding plurality of bridge springs;

and wherein each of the plurality of bridge springs is ohmically in contact with an

exposed area on the interface circuit board;

and wherein a central processing unit can selectively fire any one of the corresponding plurality of blank ammunition rounds located in any one of the plurality of receptacles.

10. The device of claim 4 wherein

each of the plurality of peripheral conductive discs is made of conductive rubber.

11. A pyrotechnic device for simulating weapons firing and/or hit indications comprising

a magazine comprised of a plurality of receptacles having a plurality of corresponding bores for receiving a corresponding plurality of rounds of blank ammunition of a first type or a second type or a corresponding plurality of rounds of blank ammunition of a first type and a

second type;

wherein each bore has upper, middle, and lower sections;

wherein each upper section has a first diameter, each middle section has a second diameter, and each lower section has a third diameter;

wherein the first diameter is less than the second diameter and the second diameter is less than the third diameter;

wherein the magazine has a top surface and a bottom surface, and wherein each upper section begins at the top surface and ends inside the respective bore, and wherein each lower section begins at the bottom surface and ends inside the respective bore;

wherein each of the plurality of rounds of blank ammunition of the first type can be inserted into any of the plurality of bores so that at least a portion of each of the plurality of rounds of blank ammunition of the first type lie inside the upper, middle, and lower sections of the respective bore at the same time;

wherein each of the plurality of rounds of blank ammunition of the second type can be inserted into any of the plurality of bores so that at least a portion of each of the plurality of rounds of blank ammunition of the second type lie inside the upper, middle, and lower sections of the respective bore at the same time;

and wherein each of the plurality of rounds of blank ammunition of the first type is the same, each of the plurality of rounds of blank ammunition of the second type is the same, and each of the plurality of rounds of blank ammunition of the first type differ in size from each of the plurality of rounds of blank ammunition of the second type.

12. The pyrotechnic device of claim 11 wherein

each of the plurality of rounds of blank ammunition of the first type is an M30 round and each of the plurality of rounds of blank ammunition of the second type is an M31 round.

13. The device as claimed in Claim 4 further comprising

an electronic housing comprised of circuitry;
wherein the circuitry provides for self-testing.

14. The device as claimed in Claim 4 further comprising

an electronic housing comprised of circuitry;
wherein the circuitry provides the capability of fifteen programmable firing sequences and igniting one or more of the plurality of blank ammunition rounds.

15. The device as claimed in Claim 4, further comprising

an electronic housing comprised of circuitry wherein
the circuitry can perform a special ignition application.

16. The device of claim 15 wherein

the special ignition application is an anti-personnel application.

21. A pyrotechnic device for simulating weapons firing and/or hit indications, comprising

a magazine comprised of a plurality of receptacles for receiving a corresponding plurality of rounds, the magazine having an underside surface;
wherein a plurality of safety interlocks are located on the underside surface of the

magazine;

further comprising a top plate having a top surface on which are located a plurality of contact pads which correspond in number to the plurality of safety interlocks;

wherein the magazine can be placed on top of the top plate so that the underside surface of the magazine lies on top of the top surface of the top plate and each of the plurality of safety interlocks on the magazine comes in ohmic contact with a corresponding one of the plurality of contact pads on the top plate;

and wherein the pyrotechnic device does not arm when power is applied unless each of the plurality of safety interlocks on the magazine is in ohmic contact with a corresponding one of the plurality of contact pads on the top plate.

22. The pyrotechnic device of claim 21 further comprising

a latching device which latches the magazine to the top plate, wherein the latching device causes each of the plurality of safety interlocks on the magazine to come in ohmic contact with a corresponding one of the plurality of contact pads on the top plate.

23. The pyrotechnic device of claim 21, further comprising

an electronic housing including circuitry; wherein

the circuitry is located on a circuit board, and the circuitry comes in ohmic contact with the plurality of contact pads on the top plate.

24. The pyrotechnic device of claim 23, wherein

a remote control signal can be used to operate the circuitry and thereby operate the

pyrotechnic device.

29. The pyrotechnic device of claim 8 further comprising

a plurality of non-conductive washers, each of which is placed around one of the plurality of transfer posts, wherein there is at least one non-conductive washer for each of the plurality of transfer posts;

wherein there are a plurality of bored holes in the electronic housing;

wherein each transfer post lies at least partially inside of one of the plurality of bored holes in the electronic housing, wherein there is one transfer post for each bored hole;

and wherein each of the plurality of non-conductive washers forms a seal between the top plate and the electronic housing so that no liquid can enter the electronic housing through any of the plurality of bored holes.

30. The pyrotechnic device of claim 29 wherein

each of the plurality of non-conductive washers is a neoprene washer.

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IX. EVIDENCE APPENDIX

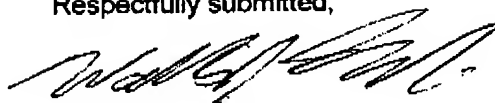
No copies of any evidence are submitted with this brief.

X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.

DATED: 10/24/06

Respectfully submitted,



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